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Dysstroma truncata Hufnagel ssp. *concinata* Stephens

By E. A. COCKAYNE, D.M., F.R.C.P.

O. H. Wild took a considerable number of *concinata* on rock faces on South Uist and had these in front of him when he described them and figured one.* He says "Colonel C. Donovan, to whom I have submitted the South Uist specimens, tells me they are similar to examples he has taken in the hilly districts of S.W. Cork and Kerry in Ireland. These lack the russet colouring of the Arran species. He considers these examples from Ireland and South Uist to be worthy of subspecific rank and intends to call this subspecies *Cidaria concinnata oressigena* (Mountain bred)".

Wild did not realize that his brief description with a figure constituted publication and made him the author of the name. He depended on Col. Donovan's statement that the S. Uist and Irish specimens were similar, but in my opinion they are very different and the name *oressigena* applies only to the S. Uist form, since the figure and description are taken from it and he had no Irish specimens before him.

Mr. Siviter Smith's discovery that *oressigena* is a valid name has made me look carefully at the series of *concinata* and *truncata* in the Rothschild-Cockayne-Kettlewell collection. There are 105 *concinata* from Arran selected to show the range of variation as completely as possible. Some Arran examples are very rufous, others have no rufous markings at all, and every gradation between them occurs; some have the black areas increased at the expense of both white and rufous, and the row of white subterminal dots on the hindwing is so suffused with dark grey that it is very inconspicuous. One is a melanic aberration and another corresponds to ab. *angustifasciata* Groth, a very beautiful form with a very large area of pale rufous both inside and outside the narrow median band. In spite of the variation they have a characteristic facies.

Our Hebridean series contains 4 from S. Uist, in general appearance very similar to Arran specimens, and though Wild says his S. Uist specimens lack the russet colouring of the Arran ones his coloured figure shows one with two distinct rufous bands like most Arran ones. The 31 from Lewis all have a mottled appearance, some with well developed rufous markings others without any, but they are not so homogeneous in size or appearance as Arran *concinata*, and I do not feel sure that they are a random sample and really represent the Lewis form.

The 14 from Tarbert on the mainland of Kintyre were taken on rocks on high ground and are single brooded. They are very like the commonest Arran form. Four, labelled Kintyre, are very prettily variegated and two have extensive pale rufous markings. I have seen no others quite like them.

There are 30 specimens from Orkney which I will describe later.

From the Highlands of Scotland (Perthshire, W. Aberdeenshire, Inverness-shire, Ross-shire, and Sutherland) where *truncata* is single

*" *Dysstroma concinnata* Stephens ssp. *oressigena* Wild." *The Scottish Naturalist*, 1931.

brooded there are 50 examples selected because they have in some respect a resemblance to Arran *concinata*, but even those most clearly marked with black, white, and rufous on the forewing have a different facies and as a rule have ampler wings. In some the hindwing is dark with the row of subterminal spots on the upper and the thick dark transverse line on the under side characteristic of all but the darkest Arran *concinata*. Some have a dark median area dusted more or less with white scales and bordered by a thin whitish line and outside it a narrow rufous band. These are ab. *perfusata* Haworth similar to the one figured by Hoffmeyer in *De Danske Maalere*, Pl. 6, fig. 17, but with the whitish line outside the median area narrower. With these are a number of large bright ab. *russata* Hbn. with a clear white median area, some with and some without a rufous band outside it, and there are a few *truncata* Hufn. with grey median area. Very rarely a specimen of the *rufescens* group with rufous median area is seen. They differ from English specimens in their more intense colouring. Their larvae are green with a red lateral stripe like English ones.

The Irish examples consist of 7 from Achil Island off the coast of Mayo, and 51 from the mountains of Kerry. In addition there are 83 in the Donovan collection, 8 with *concinata* on the label and the rest with a comprehensive label "*Cidaria concinnata* Steph. ssp. *oressigena mihi*". They may have been labelled before Wild published his paper, but they prove that he intended to use the name himself for the Irish mountain form. Of the 83 about a dozen have a white median area, one with no black markings in it and none with as much black as Arran *concinata*, and some have no rufous markings. There are one or two with a grey median area, and a few are rather dark *perfusata*, most of them with the black median area more or less dusted with white scales. The majority are much blackened and the rufous band is entirely or almost entirely obscured by black scales. They are very unlike dark *concinata* from Arran. There are no examples of the *rufescens* group.

From a wild female captured by Dr. Kettlewell I bred 41, three or four with a white median area and a rufous band, the rest dark *perfusata* exactly like some I bred from Rannoch. A few belonged to an F2 generation, of which both parents were dark and the offspring were still darker with little trace of white dusting; all had dark hindwings with distinct pale subterminal dots. They were nearly as dark as Hoffmeyer's fig. 18. The bred specimens were larger and had broader wings than Donovan's wild ones, a difference I attribute to a more plentiful supply of nutritious food.

The few from Achil Island taken by Captain R. S. Gwatkin-Williams and Mr. W. G. Sheldon are large, clearly marked with black, white, and rufous, and have a conspicuous row of whitish subterminal spots on the dark hindwings, and the transverse line on the under side is dark and thick. Their facies, however, differs from that of any Arran *concinata*. According to Sheldon their larvae were pale green with no red lateral stripe. Those I bred from Kerry were also pale green with no red lateral stripe or only a very narrow broken one, whereas the larvae of *concinata* from Arran has light and dark green longitudinal stripes and a broad reddish purple or maroon lateral stripe.

Those from Orkney are small and the majority are much darker than most Arran *concinata* but four of the lightest match the S. Uist

examples and some of the dark ones are like the darkest from Arran. The two darkest are brownish black, even darker than the melanic specimen from Arran, with mere traces of white on the forewing but with dark rufous bands visible, and a uniform brownish black hindwing. Some of the dark ones are unlike any form I have seen from elsewhere. They have less white on the forewing than any of the Arran specimens and no rufous is visible; the hindwing is almost uniformly dark and the row of white spots and the chequering of the fringes are absent. Taken as a whole the Orkney specimens have a different facies from any others. I think they belong to a distinct subspecies, but hesitate to name it on so small a number.

To sum up my conclusions, I think *concinata* Stephens is a subspecies of *truncata* and not a distinct species and consider that it inhabits the high ground on Arran, the neighbouring mainland, and South Uist in the Outer Hebrides. I do not think the Lewis specimens are worth separating, though they are less uniform in size and in the appearance of the hindwing.

Oressigena Wild is a synonym of *concinata* Stephens. Since *concinata* is a subspecies of *truncata*, ab. *angustifasciata* Groth is available and there is no need to name this form in *concinata*.

In Orkney there is a peculiar race which deserves a subspecific name.

Specimens from the Highlands of Scotland and the mountains of southern Ireland are on the whole very similar and are brighter and more boldly marked than most English ones, but cannot always be distinguished from them. In our Irish series there is a higher percentage of blackish specimens. The use of the name *concinata* for either race is incorrect and neither has been named.

Observations on Rearing *Amathes depuncta* Linn.

By D. A. B. MACNICOL, M.B., Ch.B.

On 9th September 1952 I took a female *Amathes depuncta* L. at Kincaig, Inverness-shire, a very late date for this moth and about four weeks later than the average. The moth was kept alive and fed with sugar solution, and between 12th and 14th September it laid 84 eggs. By 29th September the eggs turned dark in colour and on 3rd October they all hatched except 4 that proved infertile.

In the meantime Dr. Cockayne had heard that I was going to try to breed the species, and he wrote and described the difficulties he and other people had encountered in unsuccessful attempts, and suggested that the larvae hatched in autumn and hibernated without feeding, probably entering hollow stems. He had found that the newly hatched larvae go into clumps of three to six when kept in a glass-topped box and lose their mobility, and very soon die without eating any of the foodplants offered.

I had quickly planted two flowerpots with small plants of primrose and white dead-nettle and scattered the surface of the soil with dry hollow stems of various lengths and thicknesses, and I put half the newly hatched larvae immediately into one of these. The other half I tried with all the likely foodplants in a glass-topped box for three days. At the end of that time no sign of feeding could be seen and the larvae had all gone into clumps of 3 to 6 and were very sluggish, so